AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF	PAGES
J	1	18

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO.(If applicable)
0006	13-Dec-2002	W33SJG-1295-9683	

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than item 6)	CODE
US ARMY ENGINEER DISTRICT SAVANNAH ATTN: CT-P/ LANEY PARKER 100 W OGLETHORPE AVE SAVANNAH GA 31401-3640	EDP	**See Item 6**	

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		
	X	9A. AMENDMENT OF SOLICITATION NO. DACW21-02-B-0010
	X	9B. DATED (SEE ITEM 11) 27-Aug-2002
		10A. MOD. OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE / FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[X] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer [X] is extended, [ ] is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS.
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

[ ] A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

[ ] B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).

[ ] C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

[ ] D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor [ ] is not, [ ] is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Solicitation DACW21-02-B-0010, Static Start Frequency Control (SFC) System for Richard B. Russell Powerplant, Elberton, Georgia, is amended as follows:

See Summary of Changes.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) TEL: EMAIL:	
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)	16C. DATE SIGNED 13-Dec-2002

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

a. The bid opening date and time are changed from 18 December 2002, 11:00 a.m., Eastern Standard Time, to 7 January 2003, 11:00 a.m. , Eastern Standard Time.

b. The following clauses have been added by full text:

FAR 52.209-4002 PAST PERFORMANCE

FAR 52.216-1 TYPE OF CONTRACT (APR 1984)

c. FAR Clause 52.212-2 has been deleted in its entirety.

d. SEALED BID ENVELOPES is changed to read:

The envelope containing your bid shall be plainly marked on the lower left-hand corner as follows:

Invitation for Bid Number (IFB): DACW21-02-B-0010

Date of Opening: 7 January 2003

Time of Opening: 11:00 a.m. Eastern Standard Time

Bid For: Static Frequency Converter (Static Start) System and Appurtenances

e. Questions and Answers that have been submitted concerning this solicitation are as follows:

Question 1. On page 27, Bid Item 0011, the spec references Part 4, Section 16155, Paragraph 3.7. However, there does not appear to be a Paragraph 3.7. The spec stops at Paragraph 3.6.5 on page 72, with Lists of documents, etc. starting on page 73. Can you direct me to this Section / paragraph?

Answer 1: The reference to Paragraph 3.7 is a mistake. The correct reference is Part 1, Paragraph 19.0. All references to Paragraph 3.7 have been revised to show Part 1, Paragraph 19.0.

Question 2. The specifications and drawings state the following different ratings for the SFC current limiting reactors: Per Drawing #RR-105 the rating is 0.26 ohms. Per Specification page 60 the rating is 0.25 ohms. Per the price schedule the rating is 0.025 ohms. Please advise the correct rating.

Answer 2: The correct rating is 0.25 ohms, as stated in Part 4, Section 16155, Paragraph 2.6.3 of the specifications.

Question 3: Reference Page 49, Paragraph 2.4.2: Please comment/clarify how the equipment could best be moved through the door (i.e. via rollers, O.H. Crane, other methods used in the past). Why is there a dimensional difference between the dimensions in Paragraph 2.4.2 and Paragraph 2.4.3?

Answer 3: The dimensions given in Paragraph 2.4.2 are for the existing doorway, through which the equipment must pass. The dimensions given in Paragraph 2.4.3 are for the maximum size of the equipment enclosure, which are less than those of the doorway to allow sufficient room for passage. The method of conveying the equipment within the powerhouse is at the discretion of the contractor as described in Paragraph 1.1.1 which includes responsibility for any and all methods of conveyance. The intent is that any such devices for conveyance of equipment (i.e., portable jib cranes, rollers, mechanized platforms, air carts) will be selected for the application and furnished by the contractor, but not turned over to the Government. It should be mentioned that in Paragraph 2.4.2, the reference to Paragraph 2.3.3 for the enclosure is a typographical error and should be a reference to Paragraph 2.4.3. Paragraph 2.4.2 is revised to correct this typographical error.

Question 4: Reference Page 43, Paragraph 2.3.9.5: Please clarify who will determine the in-put and out-put signal selection of the breakers and/or units. Specifically, in-put signals #3-10 of paragraph (b) and for signals #18-21 of paragraph (c.2), for the generator breakers operation. Will the USACE provide the logic?

Answer 4: Reference Paragraph 2.3.8.1, Paragraph 2.3.9.1, and Paragraph 2.3.9.5: The intent is for the contractor to determine and design the overall logic and control of the static start system and how it will interface with the existing pump Units 5 through 8 and plant control. The actual interconnecting wiring between the static start system and the existing Units 5 through 8 will be by others, based on the contractor's design. It should be mentioned that in Paragraph 2.3.8.1, the reference to Paragraph 2.4.9.5 for the interface to plant control is a typographical error and should be a reference to Paragraph 2.3.9.5.
Paragraph 2.3.8.1 is revised to correct this typographical error.

Question 5: Reference Page 44, Paragraph 2.3.9.5.c.1: Please clarify which filter over-temperature is referred to in this part. Is it the internal filter or is it the reactor, which is normally cooled by ventilation?

Answer 5: The intended component is the internal filter.

Question 6: Line Item 0002: Based on the description in the specs and as shown on the drawings, the only reason for this item is to convert the line voltage of 13.8 to the sfc utilization voltage. If the SFC is supplied @ 13.8kv is it permissible to supply system w/o item 0002 which would then have no value or use?

Answer 6: No. See Section 16155, Paragraph 2.4.

Question 7: Section SF 1449 - Continuation Sheet, Item No. 0005 - Manufacture, test and deliver Isolated-Phase Bus, 15kV, 1200A, 240LF.

Is this 240 Linear Feet of "3-phase bus" or 240 Linear Feet of "single phase bus"?

Answer 7: The correct interpretation is 240 Linear Feet (total) of single-phase bus.

Question 8: The C.B.'s specified in PAR 2.5 of the specs are a mixture of specs for different C.B.'s.

Units are factory sealed and filled with SF6 Gas. PAR 2.8.4 do not apply to this type of C.B.

PAR 2.5.8.1. Ratings listed do not meet ANSI Standards and/or switch back and forth between different C.B.

A. OK
B. OK
C. OK
D. ANSI STD 28000 FOR 750MVA
E. ANSI STD 36000 " "
F. ANSI STD 97000 " "

Please advise of MVA Rating of C.B.

Answer 8: Regarding Paragraph 2.5.8.1: The circuit breaker is intended to interrupt 25kA, but must have a close and latch rating (peak or crest) greater than 90kA due to higher than standard system X/R ratios at the point of CB application. In order to allow CBs with K=1.0 and K>1.0, an additional column of ratings has been added. The ANSI standard C37.06 reference has been changed from 1997 to the 2000 edition. (See Part 4, Section 16155, Paragraph 1.2 References.)

Regarding Paragraph 2.8.4: This paragraph does not exist, assume referring to 2.5.8.4. This paragraph does apply to this contract, and will be enforced as written.

Regarding MVA rating of circuit breakers: The standards no longer reference an MVA rating for circuit breakers, and none will be given. Circuit breakers must comply with the minimum ratings stated in the correction, which are ANSI standard, preferred industry ratings.

Note: Specifications Part 4, Section 16155, Paragraph 2.5.8.1, Type and Rating, is revised by this amendment.

Question 9: Please clarify the involvement, if any, of the Contractor to support project kick-off and progress meetings, periodic reports or other types of on-site activities.

Answer 9: Regarding these activities under this supply contract, we are not aware of any such on-site meeting participation requirements for the contractor (SFC manufacturer) other than site visits as needed to provide proper installation engineering and manufacture of the equipment. Regarding the services of the contractor's erecting engineer during installation by others, the installation contractor (not the SFC manufacturer/erection engineer) would be responsible for attending on-site meetings of this nature and providing reports. The erection engineer would be supervising the installation as outlined in Part 1, Paragraph 19.0.

Question 10: Per Section 18.0 "Method of Payment", page 19, there is no mention of payment retention by the Government. Will there be any retention? If so, at what level and for how long?

Answer 10: No.

Question 11: Per Section 10.0 "Place of Delivery", page 15, the Contractor is responsible for all loading and off-loading at the RBR Powerhouse or other designated site at the RBR Project. Please specify the loading/off-loading site locations/storage locations and if any crane or other lifting/movement equipment is available at these locations.

Answer 11: All equipment/materials, except bus work and associated components, shall be off-loaded with the Government's overhead crane in the erection bay and stored in the Richard B. Russell power plant. Crane-hook access to the loads necessitates that load be delivered on either flatbed or soft-top (roll-back top) trailers, as opposed to closed trailers. The Contractor shall be solely responsible for off-loading all bus work at the on-site storage yard, approximately one-half mile from the power plant. Any equipment requiring used of a spreader type lifting beam or other special rigging device, shall be provided by the Contractor and delivered with the first shipment requiring such devices. See Part 4, Section 16155, Paragraph 1.1.1, Scope of Work.

Question 12: Per Section 3.3.8.2/3 "Schematic/Wiring Diagrams", page 69, please clarify if the schematic and wiring diagrams pertain to inside the Contractor supplied equipment or external to the Contractor supplied equipment such as interfacing diagrams.

Answer 12: Section 3.3.8.2/3 pertains to the Input and Output Circuit Breakers, where our intent is to have internal wiring diagrams provided with external terminal connections laid out and identified for connection to existing features by others. External interfacing diagrams to existing features will be prepared by others as part of the installation contract, but will be based on the drawings provided under this contract. We should also call attention to Part 4, Section 16155, Paragraph 1.3, Submittals, SD-04 Drawings. Our intention for the overall contract is to get similar internal wiring diagrams for the SFC itself to the extent needed for others to perform maintenance or interface wiring to existing features. For example, a schematic of the SFC should show internal wiring to terminal connection points where others will interface to existing features such as the generator breakers, exciters, and the boards in the Control Room. However, a schematic for a "disposable" printed circuit board would not be required, as long as that printed circuit board is identified on the drawings and relates to catalog data provided for the O&M Manuals (also covered under Paragraph 1.3). The only external interfacing wiring diagrams we intend for this contractor to provide is where such wiring is required between different components and/or enclosures of the overall system being provided.

Question 13: Per Section 17.3 "Failure to Meet Performance Guarantees", page 19, please clarify if there will be any performance liquidated damages (LDs) associated with the specified performance.

Answer 13: No liquidated damages have been identified in the solicitation.

Question 14: Further to the performance LD question, please clarify if there will be any delivery LDs associated with the 365 day "Time of Delivery" as stated in Section 9.0(b).

Answer 14: No liquidated damages have been identified in the solicitation.

Question 15: Please clarify the pricing methodology required for Line Item 0011 (Erection Engineer). The bid form (page 5) lists this to be a lump sum price. The specification (paragraph 19.6, page 20) implies that a per diem pricing methodology would be applied. We recommend that a per diem price be quoted, and a per diem pricing methodology be applied.

Answer 15: Line Item 0011 has been revised to change the quantity from 1 Lump Sum to Estimated 30 Days.

Question 16: The bid form refers to specification Section 16155, paragraph 3.7 to describe the scope of the Erection Engineer (Line Item 0011). Paragraph 3.7 has been omitted from specification Section 16155. Please clarify if additional information is required, or if all scope/expectations are described in Section 19.0 (starting on page 20).

Answer 16: The reference to Paragraph 3.7 is a mistake. The correct reference is Part 1, Paragraph 19.0. All references to Paragraph 3.7 have been revised to show Part 1, Paragraph 19.0.

Question 17: Please clarify if training is to be included as part of the scope (and part of the price) considered under Line Item 0011. It is our interpretation that training is to be quoted as a lump sum under Line Item 0010 (ie, not included as part of Line Item 0011).

Answer 17: The training under Item 0010 is separate from the services of the erecting engineer Item 0011, even if both items utilize the same person.

Question 18: Please clarify the scope required under Line Item 0013 (Off-Loading at the Project Site). Is the scope limited to unloading the equipment from the truck and placing on the asphalt pavement beside or near the truck, or does the scope include off-loading the equipment from the truck and moving the equipment to into the Power House or into a warehouse? If moving the equipment into the Powerhouse or into a warehouse is required, please provide more detail where the equipment is to be stored such that we can assess what type of equipment will be required to move the equipment from the truck to the designated place of storage.

Answer 18: The contractor must off-load and move the equipment to where it will be temporarily stored at the Richard B. Russell Powerhouse. See Question/Answer No. 11.

Question 19: To summarize the specification, the 13.8 kV circuit breakers must utilize SF6 as the interrupting medium. They must be a draw-out type of breaker, and be designed and tested to ANSI standards. Is it acceptable to propose an alternative of an SF6 draw-out circuit breaker that has been tested to IEC standards (not ANSI)?

Answer 19: The breakers must be built to the applicable ANSI standards. However, our experience with breakers built in Europe to IEC standards indicates that these breakers also meet the applicable ANSI standards. Many manufacturers offer detailed information to that effect if requested. If the contractor can provide documentation that the IEC breakers also meet the applicable ANSI requirements, that would be acceptable. So that this question and response is not misinterpreted, the alternative breaker must still be an SF6 draw-out type.

Question 20: Section SF 1449 - Continuation Sheet Item No 0005 - Please clarify if "240LF" is 3-phase linear feet or single phase linear feet.

Answer 20: This is intended to be 240 linear feet (total) of single-phase bus.

Question 21: Specification section 2.6.3, "Ratings" states the Impedance, ohms as 0.25. Section SF 1449 - Continuation Sheet, Item No. 0004 states an impedance of .025 ohms. Please clarify as to which value is correct.

Answer 21: The correct rating is 0.25 ohms as stated in Section 2.6.3.

Question 22: Item 3.1.2.e requires a heat run test at rated load. Please confirm that no heat run test is required, but instead a test at rated voltage and a test of rated current is acceptable.

Answer 22: In the event that rated load cannot be reliably achieved at the time of the test, the manufacturer may substitute a combination of the rated voltage test and rated current test.

Question 23: Item 0002 indicates 6 MVA transformers. This rating is not sufficient. Please confirm the transformer rating to be determined by the supplier.

Answer 23: The contractor is to determine the required kVA rating of these transformers, based on the requirements of the SFC. Item 0002 indicated 6 MVA as a rough figure for scoping purposes, but the manufacturer is not constrained to that rating.

Question 24: In reference to Item 0011. Clarification - does this imply a complete installation or just supervisory engineering services?

Answer 24: This is a supply only requirement, with erection engineering services to be provided at the time of installation. The installation will be advertised in a separate solicitation.

Question 25: Page 27, Bid Item 0011, the spec references Part 4, Section 16155, Paragraph 3.7. However, there does not appear to be a Paragraph 3.7 in the specification. The spec stops at Paragraph 3.6.5 on page 72, with Lists of Documents, etc. starting on page 73. Can you direct us to this Section / paragraph?

Answer 25: The reference to Paragraph 3.7 is a mistake. The correct reference is Part 1, Paragraph 19.0. All references to Paragraph 3.7 have been revised to show Part 1, Paragraph 19.0.

Question 26: Page 5, Bid Item 0011 requests a lump sum price for the Erecting Engineering effort. However, there is no indication of the number of days that should be assumed for this effort. Since the installation will be done by others, the specification should provide guidance on the number of days to assume in this lump sum price. Alternatively we can quote a time and

material rate, with the actual price to be determined by the number of hours required.

Answer 26: Line Item 0011 has been revised.

Question 27: Page 50 through 59, sections 2.5 and 2.6 specify circuit breakers and current limiting reactors. Can circuit breakers that have an interrupting capacity that is greater than 50.7 kA be used? This would eliminate the need for the current limiting reactors.

Answer 27: The current limiting reactors will be required.

Question 28: Page 50, Section 2.5, specifies SF6 breakers. Equivalent vacuum breakers are generally less expensive than SF6 technology. Are vacuum breakers of adequate rating acceptable?

Answer 28: The SF6 breakers are required for various reasons including safety and reliability, and vacuum breakers are not be acceptable.

Question 29: Page 2, Item 0002, indicates two 6 MVA input and output transformers. However, Section 2.4.2 says the KVA rating shall be determined by the SFC manufacturer. These requirements appear to conflict. Which of these is applicable? Would a different transformer solution be acceptable, assuming it will fit through the doors?

Answer 29: Our intent was for the SFC manufacturer to determine the required kVA rating and configuration of the transformers based on the requirements of the SFC being submitted, so long as the transformers will pass through the available doorway. Item 0002 indicated 6 MVA as a rough figure for scoping purposes, but the manufacturer is not constrained to that rating.

Question 30: Page 40, Section 2.3.6.3 specifies air cooling for the SFC. Liquid cooling could be advantageous since there would be less heating in the room. Is liquid cooling acceptable considering that there is raw cooled water is available in the immediate area planned for the SFC units?

Answer 30: No.

Question 31: Page 38, Section 2.3.2.1 specifies a 12.7 MW SFC. However, this section also states that the supplier will be responsible to propose an appropriate SFC size to guarantee a soft start of one pump. These two requirements change the party responsible for sizing the units. If the equipment suppliers are responsible for the SFC sizing, we will need all information necessary to size the units. Alternatively, if the Corps of Engineers specifically wants 12.7 MW units, the second statement needs to be deleted.

Answer 31: The 12.7 MW rating is specified as a minimum acceptable value. Our intent is for the SFC manufacturer to have responsibility in determining the appropriate SFC rating to soft start one pump. If additional information beyond what is presented in the supply contract specifications is required by SFC manufacturers to adequately prepare bids, then the SFC manufacturers must itemize and request that information.

Question 32: Page 40, Section 2.3.6.2 specifies 4 separate enclosures with maximum dimensions. It could be advantageous to the Corps to allow any

configuration that fits into the total available space. Can the specification be changed to define the available space and allow alternate physical configurations?

Answer 32: The specified number of enclosures and dimensions constitute an acceptable maximum of complexity and probable layout. Our intent is for the SFC manufacturer to determine the optimum sizes and configurations of enclosures for the system to be provided that will pass through the specified doorways and fit in the available space shown on the drawings.

Question 33: Paragraph 2.3.6.2 SFC enclosure. We have determined that the dimensions specified are very limiting. After reviewing this par., dwg e-3 and visiting the site the determination was made that the SFC will fit in the total space allotted for the system, but cannot meet the required dimensional restraints. Request the dimensions be removed & the supplier be responsible for the fit into the existing floor space.

Answer 33: The specified number of enclosures and dimensions constitute an acceptable maximum of complexity and probable layout. Our intent is for the SFC manufacturer to determine the optimum sizes and configurations of enclosures for the system to be provided that will pass through the specified doorways and fit in the available space shown on the drawings.

Question 34: Per Section 2.7.4 “Bus Structure”, page 61, the specification states “All hangers and supports and ancillary hardware required for mounting the bus structures shall be supplied by the Contractor.” In order to comply with this requirement it is necessary to know the seismic requirements, ceiling structural strength and other mounting limitations at the site. Please advise.

Answer 34: The additional load imposed by hanging the buswork from the deck is not very significant (normal buswork loading). The design of the transformer deck included substantial additional working loads to handle moving loads from delivery of substantial equipment (transformers, etc.) over the life of the facility. The buswork loading should not pose a problem with the existing transformer deck. Obviously, the design of the buswork connections should be in accordance with current seismic design criteria and should take into consideration locations of existing reinforcing, etc., in the deck. In accordance with recently enacted seismic design criteria, the bus supports should be designed for the lateral acceleration listed for zip code 30635 in the 2000 edition of the International Building Code (IBC).

Question 35: The motor data included the inertia of the motor rotor, but no other information about the mechanical system was specified. Our engineers are requesting the inertia of the pump and shafting. In one part of the specification, the VFD rating is shown as 12.7 MW, but in another part of the specification it states that the contractor is responsible for starting the motor. This implies that it is the responsibility of the Supplier to provide a VFD, that is sized to adequately start your system, which may be greater than the specified 12.7 MW.

Answer 35: The 12.7 MW rating is specified as a minimum acceptable value. Our intent is for the SFC manufacturer to have responsibility in determining the appropriate SFC rating to soft start one pump.

Question 36: Par. 3.2 of Specs. (Input/Output Tfmr Tests): This paragraph indicates only the first transformer requires design tests performed. On our proposed system the input & output transformers are slightly different sizes & voltages. Does this require a set of design tests for both, one of the input transformers and one of the output transformers, or will one set of tests on the input transformer which is the larger, suffice?

Answer 36: If the transformers are of different sizes and voltages, we would require tests on one of each.

Question 37: ANSI designates type or design tests to be once for a particular design. Then certified copies of these tests are used in the future; or if changes to a design are made new tests are run & the same process is used. Occasionally, on multiple pieces one set of tests are done to prove all.

You have used this procedure on all the equipment on this procurement, except the AC reactors. Due to the extreme costs involved in the reactor type tests, request you allow either one set of type tests covering all the reactors or allow the previous type tests on file. Please advise.

Answer 37: One set of type tests for all reactors is acceptable. If the reactors are the same as a design that has a type test already on file, a certified copy of that test is acceptable.

Question 38: Per Bid Item 0011, "Services of Erection Engineers…", this description implies that more than 1 Erection Engineer is called for to cover the SFC, circuit breaker and iso-phase bus scopes. Bid Item 0011 further refers to Section 3.7, which is not in the current specification. However, Section 19.0 does define the services of one (1) erection engineer who must be employed by the SFC supplier. Please advise the contents of Section 3.7 and advise if separate erection engineers are required for SFC, circuit breaker and iso-phase bus scopes.

Answer 38: Section 3.7 is no longer a part of the specifications. Part 1, Paragraph 19.0 is the correct reference for "Services and Payment of Erecting Engineer. Bid Item 0011 has been changed to read "Services of Erection Engineer during installation of the Static Start System. (SFC, Input/Output Circuit Breakers, Isophase Bus). (Part 1, Paragraph 19.0). Bid Item 0011 is being revised by amendment.

Question 39.

Bid Item 0007 of Section SF 1149 - Continuation Sheet states: "Perform Field Test (Input and Output Circuit Breakers). (Section 16155, Paragraph 3.3.9).

Part 3, Section 01270, Measurement and Payment, Item 1.3, Payment, Bid Item 0007 states: "The performance of the field testing on the new static frequency control system will be paid for under Bid Item 0007, "Perform Field Test" as described in Part 4, Section 16155."

Part 4, Section 16155 contains Field Test specifications for Input/Output breakers only. Please clarify if Bid Item 0007 applies to input/output breakers only or the complete SFC system.

Answer 39: The intent is to include the complete SFC system in the field testing. The testing in Paragraph 3.3.9 describes only the Input/Output breaker tests. However, Paragraph 2.3.8.1 requires field testing of the SFC with the intent of measuring performance of the SFC against the requirements of Paragraphs 2.3.1 and 2.3.2. Report requirements of these tests would be similar to the breaker testing.

(End of Questions/Answers)

e. The following revisions are made to the solicitation and the changes are incorporated into and made a part of the conformed solicitation.

(1) The Schedule of Supplies/Services are revised as follows:

CLIN 0001

The CLIN extended description has changed from Manufacture, test, and deliver one Static Frequency Control (SFC) System for Units 5-8, 12 MW, with exciter tie-in. (Section 16155, Paragraph 2.3) to Provide installation engineering, manufacture, test, and deliver one Static Frequency Control (SFC) System for Units 5-8, 12 MW, with exciter tie-in. (Part 4, Section 16155, Paragraph 2.3).

The unit of issue has changed from Each to Lump Sum.

CLIN 0002

The CLIN extended description has changed from Manufacture, test, and deliver Input and Output Transformers, 15kV dry-type (assume two 6 MVA in parallel for input and output).(Section 16155, Paragraph 2.4) to Provide installation engineering, manufacture, test, and deliver Input and Output Transformers, 15kV dry-type (assume two 6 MVA in parallel for input and output). (Part 4, Section 16155, Paragraph 2.4).

CLIN 0003

The CLIN extended description has changed from Manufacture, test, and deliver Input and Output Circuit Breakers, SF6 drawout, 15kV, 1200A, 25kA (two input, one output)(Section 16155, Paragraph 2.5) to Provide installation engineering, manufacture, test, and deliver Input and Output Circuit Breakers, SF6 drawout, 15kV, 1200A, 25kA (two input, one output) (Part 4, Section 16155, Paragraph 2.5).

CLIN 0004

The CLIN extended description has changed from Manufacture, test, and deliver Current-Limiting Reactors, 15kV, 700A, .025 ohm (two 3-phase banks).(Section 16155, Paragraph 2.6) to Provide installation engineering, manufacture, test, and deliver Current-Limiting Reactors, 15kV, 700A, 0.25 ohm (two 3-phase banks).(Part 4, Section 16155, Paragraph 2.6).

CLIN 0005

The CLIN extended description has changed from Manufacture, test, and deliver Isolated-Phase Bus, 15kV, 1200A, 240LF, with six T-taps and 12 elbows.(Section 16155, Paragraph 2.7) to Provide installation engineering, manufacture, test, and deliver Isolated-Phase Bus, 15kV, 1200A, 240LF, with

six T-taps and 12 elbows. (Part 4, Section 16155, Paragraph 2.7).

CLIN 0006

The CLIN extended description has changed from Perform Special Factory Testing (SFC, transformers, circuitbreakers, reactors, isophase bus). (Section 16155, Paragraphs 3.1.2, 3.2.1, 3.3.7, 3.4, and 3.5) to Perform Special Factory Testing (SFC, transformers, circuitbreakers, reactors, isophase bus). (Part 4, Section 16155, Paragraphs 3.1.2, 3.2.1, 3.3.7, 3.4, and 3.5).

CLIN 0007

The CLIN extended description has changed from Perform Field Test (Input and Output Circuit Breakers). (Section 16155, Paragraph 3.3.9) to Perform Field Test (Static Frequency Control System and Input and Output Circuit Breakers). (Part 4, Section 16155, Paragraphs 3.1.3 and 3.3.9).

CLIN 0008

The CLIN extended description has changed from Accessories (wrenches, tools, special equipment - SFC and Input/Output Circuit Breakers). (Section 16155, Paragraph 2.3.15 and 2.5.16) to Accessories (wrenches, tools, special equipment - SFC and Input/Output Circuit Breakers). (Part 4, Section 16155, Paragraph 2.3.15 and 2.5.16).

CLIN 0009

The CLIN extended description has changed from Spare Parts (SFC and Input/Output Circuit Breakers). (Section 16155, Paragraphs 2.3.13 and 2.5.17) to Spare Parts (SFC and Input/Output Circuit Breakers). (Part 4, Section 16155, Paragraphs 2.3.13 and 2.5.17).

CLIN 0010

The CLIN extended description has changed from Training of Government Personnel in operation and maintenance of SFC System and equipment. (Section 16155, Paragraphs 3.3.12 and 3.6) to Training of Government Personnel in operation and maintenance of SFC System and equipment. (Part 4, Section 16155, Paragraphs 3.3.12 and 3.6).

CLIN 0011

The CLIN extended description has changed from Services of Erection Engineers during installation of the Static Start System. (SFC, Input/Output Circuit Breakers, Isophase Bus). (Section 16155, Paragraph 3.7) to Services of Erection Engineer during installation of the Static Start System. (SFC, Input/Output Circuit Breakers, Isophase Bus). (Part 1, Paragraph 19.0).

CLIN 0012

The CLIN extended description has changed from Travel Costs/Per Diem for Erection Engineers (Section 16155, Paragraph 3.7) to Travel Costs/Per Diem for Erection Engineer (Part 1, Paragraph 19.0). The total of this Line Item is estimated. The Contractor will be reimbursed at actual expenses in accordance with the Government Joint Travel Regulations (JTR)..

The pricing detail quantity 1.00 has been added.
The unit of issue has changed from Trips to Lump Sum.

CLIN 0013

The CLIN extended description has changed from Off-Loading at the Project Site to Powerhouse to Off-Loading at the Project Site to Powerhouse (Part 4, Section 16155, Paragraph 1.1.1).

(2) PART 1 GENERAL, Paragraph 1.1.1, General, is changed to read:

One static frequency control system shall be manufactured, shop tested, prepared and loaded for shipment, delivered f.o.b. destination, off-loaded into the powerhouse, field tested, and made ready for commercial operation as described in the Schedule, together with all accessories and spare parts specified herein. Installation of the SFC will be by others. Training courses shall also be provided for The Richard B. Russell powerhouse personnel, as described in the specifications.

(3) PART 1, Paragraph 9.0 TIME OF DELIVERY, Subparagraph b., is changed to read:

Richard B. Russell Project one static frequency control system complete, including all accessories and approved as-built drawings, spare parts, and approved O&M manuals within 270 calendar days after date of receipt of signed contract.

(4) PART 3, Section 01270, MEASUREMENT AND PAYMENT, Paragraph 1.3 is changed as follows:

1.3 PAYMENT

Payment for all work specified, shown or incidental to complete the work will be made as follows:

Bid Item 0001; Installation Engineering, Manufacture, Test, and Deliver One Static Frequency Control System

The installation engineering, manufacture, testing and delivery of the static frequency control system will be paid for under Bid Item No.0001, "Installation Engineering, Manufacture, Test, and Deliver One Static Frequency Control System" as described in Part 4, Section 16155. This work will be considered complete after the final testing reports have been submitted and approved, and the equipment has been delivered and accepted.

Bid Item 0002; Installation Engineering, Manufacture, Test, and Deliver Input and Output Transformers

The installation engineering, manufacture, testing and delivery of the input and output transformers will be paid for under Bid Item No.0002,"Installation Engineering, Manufacture, Test, and Deliver Input and Output Transformers" as described in Part 4, Section 16155. This work will be considered complete

after the final testing reports have been submitted and approved, and the equipment has been delivered and accepted.

Bid Item 0003; Installation Engineering, Manufacture, Test, and Deliver Input and Output Circuit Breakers

The installation engineering, manufacture, testing and delivery of the input and output circuit breakers will be paid for under Bid Item No. 0003,"Installation Engineering, Manufacture, Test, and Deliver Input and Output Circuit Breakers" as described in Part 4, Section 16155. This work will be considered complete after the final testing reports have been submitted and approved, and the equipment has been delivered and accepted.

Bid Item 0004; Installation Engineering, Manufacture, Test, and Deliver Current-Limiting Reactors

The installation engineering, manufacture, testing and delivery of the current-limiting reactors will be paid for under Bid Item No.0004,"Installation Engineering, Manufacture, Test, and Deliver Current-Limiting Reactors" as described in Part 4, Section 16155. This work will be considered complete after the final testing reports have been submitted and approved, and the equipment has been delivered and accepted.

Bid Item 0005; Installation Engineering, Manufacture, Test, and Deliver Isolated-Phase Bus

The Installation Engineering, manufacture, testing and delivery of the isolated-phase bus will be paid for under Bid Item No.0005,"Installation Engineering, Manufacture, Test, and Deliver Isolated-Phase Bus" as described in Part 4, Section 16155. This work will be considered complete after the final testing reports have been submitted and approved, and the equipment has been delivered and accepted.

Bid Item 0006; Perform Special Factory Tests

The performance of special factory tests of the static frequency control system will be paid for under Bid Item No. 0006, "Perform Special Factory Tests", as described in Part 4, Section 16155. This work will be considered complete after testing has been completed, inspection reports for the factory tests have been submitted by the Contractor, and the inspection reports have been approved by the Government.

Bid Item 0007; Perform Field Test

The performance of the field testing of the new static frequency control system and input/output circuit breakers will be paid for under Bid Item 0007, "Perform Field Test," as described in Part 4, Section 16155. The testing will be considered complete after the field test has been completed, inspection reports for the field tests have been submitted by the Contractor, and the inspection reports have been approved by the Government.

Bid Item 0008; Wrenches, Tools, and Special Equipment

The furnishing of wrenches, tools, and special equipment for the installation and maintenance of the static frequency control system will be paid for under Bid Item No. 0008, "Wrenches, Tools and Special Equipment," as described in

Part 4, Section 16155. This work will be considered complete after the required materials have been delivered to the Richard B. Russell powerhouse.

Bid Item 0009; Spare Parts

The furnishing of spare parts for the static frequency control system will be paid for under Bid Item No. 0009, "Spare Parts," as described in Part 4, Section 16155. This work will be considered complete after delivery of all required spare parts to the Richard B. Russell powerhouse.

Bid Item 0010; Training of Government Personnel

The training of Government personnel on the operation and maintenance of the static frequency control system, will be paid for under Bid Item No. 0010, "Training of Government Personnel," as described in Part 4, Section 16155, Paragraph 3.6. This work will be considered complete after completion of the required classes at the Richard B. Russell powerhouse.

Bid Item 0011; Services of Erection Engineers

The services of erection engineers during installation, testing and commissioning of the static frequency control system will be paid for under Bid Item No. 0011 as described in Part 1, Paragraph 19.0.

Bid Item 0012; Travel Costs and Per Diem for Erection Engineers

The Travel Costs and Per Diem for Erection Engineers will be paid for under Bid Item 0012 as described in Part 1, Paragraph 19.0.

Bid Item 0013; The contractor shall be responsible for the cost of all loading and off-loading activities from any port-of-entry, if applicable, and at the RBR Powerhouse or other designated site at the RBR Project. These services will be paid for under Bid Item No. 0013 as described in Part 1, Paragraph 10, "Place of Delivery."

Bid Item 0014; Bid Data – Bid Data List. Exhibit A: NSP - Not Separately Priced.

Bid Item 0015; Contract Data – Contract Data List. Exhibit B: NSP – Not Separately Priced.

(5) PART 4, SECTION 16155, Paragraph 1.1.1 Scope of Work

This section covers the work necessary to provide installation engineering, prepare drawings, data, and installation instructions, to manufacture, to shop test, to prepare and load for shipment, deliver f.o.b. destination, to off-load into the powerhouse, and to field test and make completely operational, one static start system for the Richard B. Russell Powerhouse. The contractor shall be responsible for the cost of all loading and off-loading activities from any port-of-entry, if applicable, and at the RBR Powerhouse or other designated site at the RBR Project. All equipment/materials, except bus work and associated components, shall be off-loaded with the Government's overhead crane in the erection bay and stored in the Richard B. Russell power plant. Crane-hook access to the loads necessitates that load be delivered on either flatbed or soft-top (roll-back top) trailers, as opposed to closed trailers. The Contractor shall be solely

responsible for off-loading all bus work at the on-site storage yard, approximately one-half mile from the power plant. Any equipment requiring used of a spreader type lifting beam or other special rigging device, shall be provided by the Contractor and delivered with the first shipment requiring such devices. The static start system will be used to soft start a selected generator/motor from Units 5, 6, 7, or 8.

(6) Part 4, Section 16155, Paragraph 1.2, References: The ANSI standard C37.06 reference has been changed from the 1997 edition to the 2000 edition.

(7) Part 4, Section 16155, Paragraph 2.3.8.1, is changed to read:

The Contractor shall provide the local control, protection, metering (machine voltage, line voltage converter current and unit speed), indication, annunciation, and auxiliary power features stated below for the static starter and for interface to the plant control (paragraph 2.3.9.5) and auxiliary power systems as well as to each and all pump Units No. 5 through 8. The Government will perform the grounding, conduit and cable installation and termination of incoming circuits. Checkout and testing work will be performed by the Government and the Contractor's Commissioning Engineer as described in paragraphs 3.1.3 and 3.3.9. In the following subparagraphs, the term "control" will sometimes be used in lieu of "protection, metering, indication, annunciation, and auxiliary power" for brevity.

(8) Part 4, Section 16155, Paragraph 2.4.2. In Paragraph 2.4.2, the reference to Paragraph 2.3.3 for the enclosure is a typographical error and is corrected to read Paragraph 2.4.3.

(9) Part 4, Section 16155, Paragraph 2.5.8.1, Type and Rating, is changed as follows:

Each circuit breaker shall be electrically operated, metal-clad, with SF6 type interrupters, and suitable for indoor 60 Hz service. The circuit breakers shall be rated on a symmetrical current basis and shall have characteristics in accordance with Table 1 or Table A1 of ANSI C37.06 and as follows:

	Table 1	Table A1
a. Rated Maximum Voltage, kV	15	15
b. Rated Continuous Current, Amps	1200	1200
c. Rated Interrupting Time, cycles	5	5
d. Rated Short Circuit Current, Amps	40,000	--
e. Rated Short Circuit Current at Rated Max kV, Amps	--	28,000
f. Maximum Symmetrical Interrupting Capability, Amps	--	36,000
g. Closing and Latching Capability, Amps, Crest	104,000	97,000

Except as otherwise specified, the circuit breakers shall conform to the applicable requirements of the following Standards: IEEE C37.04, C37.11, C37.09, C37.100; ANSI C37.06; NEMA SG 4.

(10) Part 4, Section 16155, Paragraph 3.1.3, Field Tests, is added as follows:

Instrument blocking and other protection for delicate mechanisms installed for shipment and handling shall be removed just prior to testing. Operational testing of the static frequency control system, including indication and annunciation devices, shall be performed by the Contractor under Government witness to validate performance of the intended equipment and system functions. The Contractor shall submit complete tests procedures for Contracting Officer approval. The static frequency control system shall be thoroughly checked for proper operation and shall verify that all necessary adjustments have been made. The testing shall verify the following operation:

a. The static starting equipment shall break the motor away from a dead stop. At synchronous speed, the static starter shall synchronize the motor to the system bus.

b. The static starting equipment shall accelerate and synchronize any one (1) of the four (4) motors over an input voltage range of 13.8 kilovolts plus or minus 5 percent and frequency range of 60 plus or minus 0.1 hertz. in a minimum amount of time (not to exceed five minutes).

c. The starter shall be capable of five (5) unit starts per hour without exceeding its temperature rise limitations.

d. Ambient operating temperature of all equipment shall not exceed 40 degrees C.

3.1.3.1 Test Reports

The Contractor shall furnish five certified copies of the reports of all field tests including complete test data. Test reports of all witnessed tests shall be signed by the witnessing representatives of the Contractor and the Contracting Officer. Reports shall as a minimum include the following:

a. purpose

b. procedure used

c. collected data

d. results

e. date and time tests were performed

f. test engineer's name, title, and signature

g. Government witness's name, title, and signature